MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
717 17th Street
Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: JM PVC Single Ply Roof Systems over Lightweight Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 12-0410.10 and consists of pages 1 through 20.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	PVC
Deck Type:	Lightweight Concrete
Maximum Design Pressure:	-367.5 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product Name	Dimensions	Test Specifications	Product Description
JM PVC Membrane	50 mil x 39 or 78" x 100' 60 mil x 39 or 78" x 100' 80 mil x 39 or 78" x 75'	ASTM D4434	PVC polyester reinforced membrane.
JM PVC Fleece Backed	50 mil x 76" x 90' 60 mil x 76" x 90'	ASTM D4434	PVC polyester reinforced membrane backed with a lightweight polyester fleece.
DynaBase	39-3/8" x 49'2"	ASTM D6163	A glass reinforced SBS modified bitumen base sheet.
DynaBase HW	39-3/8" x 49'2"	ASTM D6163	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaFast 180 S	39-3/8" x 49'2"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
JM PVC Profile	1-1/2" wide x 1-1/4" high x 10' long	Proprietary	Non-reinforced, extruded PVC for simulating the aesthetics of standing seam metal roofing.
JM PVC Spine	¾" wide x 13/16" high x 7' long	Proprietary	Non-reinforced, extruded PVC for simulating the aesthetics of standing seam metal roofing.
JM Urethane Insulation Adhesive	N/A	Proprietary	Urethane insulation adhesive.
JM Two Part Urethane Insulation Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
JM PVC Membrane Adhesive (Low VOC)	N/A	Proprietary	Low solvent based adhesive.
JM PVC Membrane Adhesive (Water Based)	N/A	Proprietary	Water borne adhesive.
JM Roofing System Urethane Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.

MBR Low VOC Membrane Adhesive	N/A	Proprietary	Single-component, polyurethane low solvent based adhesive.
MBR RA Membrane Adhesive	N/A	Proprietary	Two-component, polyurethane based adhesive.
JM PVC Penetration Pan	Various	ASTM D4434	Molded PVC for flashing penetration.
JM PVC Pipe Boots	Various	ASTM D4434	Non-reinforced molded PVC flashing penetrations.
JM PVC Universal Corner	Various	ASTM D4434	Non-reinforced molded PVC for inside and outside corner flashing.
JM PVC T-Joint Patch	Various	ASTM D4434	Non-reinforced PVC used to cover T-joints and fasteners.
JM PVC Detail Membrane	Various	ASTM D4434	Non-reinforced PVC used for pipe and corner flashing.
JM PVC Detail Strip	Various	ASTM D4434	PVC used to waterproof joints.
JM PVC Coated Metal	Various	ASTM D4434	JM PVC laminated onto galvanized steel for metal flashings and edge details.
JM PVC Walkpad	Various	ASTM D4434	Textured PVC walk pad.
JM PVC Heavy-Duty Walkpad	Various	ASTM D4434	Textured PVC walk pad.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Invinsa Roof Board	High-density polyisocyanurate with fiber glass reinforced facers	Johns Manville
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI	Polyisocyanurate Insulation	Johns Manville
ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI	Polyisocyanurate Insulation with glass facer	Johns Manville
ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI	Polyisocyanurate Insulation with coated glass facer	Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	High Load Fasteners	Insulation and membrane fastener	Various	Johns Manville
2.	High Load Plates	Galvanized steel plates for use with High Load Fasteners	2-3/8" diameter	Johns Manville
3.	Twin Loc-Nail	Base sheet fastener *with and without* integrated Plate.	2.7" dia. Plate	Altenloh, Brink & Co. U.S., Inc.
4.	Straight Line Batten Bar	Oval pre-punched metal batten bar	1" x 100' coil	Altenloh, Brink & Co. U.S., Inc.

EVIDENCE SUBMITTED:

Test Agency Name	Identifier	Report	Date
FM Approvals	3018807	FM 4470	06/25/04
	3014692	FM 4470	08/05/03
	3016629	FM 4470	12/12/03
	3025881	FM 4450	08/09/06
	3015444	FM 4450	07/11/03
	3030351	FM 4470	08/01/07
	3037540	FM 4450	10/20/10
	3040105	FM 4470	11/24/10
Trinity|ERD	02764.09.05	TAS 114	09/09/05
	02762.03.05	TAS 114	03/30/05
	J45020.09.13-1-R1	TAS 114	09/12/13
	J45960.09.13	TAS 114	09/16/13
IRT-Arcon, Inc.	06-0059	TAS 114	09/21/06
Momentum Technologies, Inc.	NX21J0A	ASTM D 4434	06/01/11
	NX21J0B	ASTM D 4434	07/20/11
	NX21J0C	ASTM D 4434	06/01/11
PRI Construction Materials Technologies, LLC	JMC-088-02-01	ASTM D1867/TAS 117 B	09/06/13
	JMC-107-02-01-R4	ASTM D5147/D903/D1876 TAS 117(A)/(B)/(C)	11/13/13
	JMC-086-02-01	TAS114	01/03/13
	JMC-108-02-01	TAS 114(J)	04/16/13
	JMC-131-02-01	TAS 114(J)	08/20/13
	JMC-132-02-01	TAS114	04/17/13
	JMC-132-02-02	TAS114	07/01/13
	JMC-141-02-01	TAS 114(J)	04/18/13
	JMC-143-02-01	TAS 114(D)	07/01/13
	JMC-162-02-01	FM 4474/TAS114	09/06/13
	JMC-163-02-01	FM 4474/TAS114	09/06/13
Atlantic & Caribbean Roofing Consultants, LLC	ACRC 06-045	TAS 114	12/15/06

APPROVED ASSEMBLIES

Membrane Type: Single Ply, PVC

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Lightweight Insulating Concrete, minimum 160 psi Elastizell over concrete deck.

System Type A(1): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with JM Two-Part Urethane Insulation Adhesive in ¾" ribbons spaced 12" o.c. (with all insulations not 25 PSI) or JM Urethane Insulation Adhesive in ½" ribbons spaced 6" o.c. (with all insulations with 25 PSI) Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Invinsa Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Invinsa Roof Board shall be adhered to the insulation with JM Urethane Insulation Adhesive in ¾" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the insulation as specified below.

Option #1: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.67 gal./sq.,on both membrane and the substrate for a total of 1.34 gal./sq. with min. 1.5" heat welded side laps.

Option #2: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 0.83 gal./sq., on both the membrane and the substrate for a total of 1.67 gal./sq. with min. 1.5" heat welded side laps.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9.)

Membrane Type: Single Ply, PVC

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Lightweight Insulating Concrete, minimum 200 psi Mearlcrete, Celcore or Elastizell over concrete deck.

System Type A(2): One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with Tite-Set Insulation Adhesive in 3-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Invinsa Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Invinsa Roof Board shall be adhered to the insulation with JM Urethane Insulation Adhesive in ¾" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the insulation as specified below.

Option #1: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.67 gal./sq.,on both membrane and the substrate for a total of 1.34 gal./sq. with min. 1.5" heat welded side laps.

Option #2: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 0.83 gal./sq., on both the membrane and the substrate for a total of 1.67 gal./sq. with min. 1.5" heat welded side laps.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9.)

Membrane Type: Single ply, PVC

Deck Type 4: Lightweight Concrete, Non-insulated

Deck Description: Min. 500 psi Celcore MF with Celcore HS Rheology Modifying Admixture; Min. 1/8" slurry coat; Min. 1" EPS board; Min. 2" top coating with PVA curing compound cast over cementitious wood fiber, structural concrete or Min. 22 ga., Grade 33, vented Type B steel deck attached to structural supports spaced a maximum 5-ft o.c. with 5/8" puddle welds at each flute. Steel deck side laps stitched with 1/4"-14 HWH screws at a maximum 15" o.c.

System Type E: Base sheet mechanically fastened.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Sheet: One ply of DynaFast 180 S mechanically fastened with min. 1.8" Twin-Loc Nail without integrated plate & Straight Line Batten Bar spaced 6" o.c. within the 4" wide torch welded side laps.

Membrane: JM PVC Fleece Backed applied with approved mopping asphalt at an application rate of 20-40 lbs./sq. with min. 1.5" heat welded side laps.

Maximum Design Pressure: -60 psf. (See General Limitation #9.)

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Lightweight Insulating Concrete

System Type F(1): Membrane fully adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Deck:	22 ga. Vented corrugated 1.5" WR Type B steel fastened to the 6'-0" o.c. steel supports with #12-24 Tek 5 SD screws. One screw per every flute and fastened 6" o.c. to steel testing frame. Side laps of sheets fastened with #12 SD screws 12" o.c.
Lightweight Concrete:	Lightweight Insulating Concrete with a minimum compressive strength of 330 psi, and a MCRF of 233.614 lbf with ES FM-90 or OMG 1.7" BSF. A ¼" thick slurry of lightweight insulating concrete poured over deck. One layer of EPS Dyplast with a density of 1.0 lb. firmly pressed into the slurry. LWIC was poured over the EPS board to a thickness of 2" minimum.
Membrane:	JM PVC Fleece Backed fully adhered to the deck with JM PVC Membrane Adhesive (water-based) applied at a rate of 1 gal/sq. to the substrate and heat-welded 3" side laps.
Maximum Design Pressure:	-90 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Lightweight Insulating Concrete

System Type F(2): Membrane fully adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Deck:	Structural Concrete Deck
Lightweight Concrete:	Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture cast to a depth of 1/8" with a wet cast density of 49 lb./ft³ over sturctural concrete. Minimum 1" thick EPS boardshall be placed into the wet concrete. Minimum 2" thick Celcore MF Cellular Concrete with Celcore HS admixture with a wet cast density of 44.6 lb./ft³ added as the top coat. Celcore PVA Curing Compound applied over the top coat at a rate of 0.33 gal/sq.
Membrane:	JM PVC Fleece Backed fully adhered to the deck with JM PVC Membrane Adhesive (water-based) applied at a rate of 1 gal/sq. to the substrate and heat-welded 1.5" side laps.
Maximum Design Pressure:	-367.5 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 380 psi Concrecel Cellular Lightweight Insulating Concrete cast over structural concrete.

System Type F(3): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: JM PVC Fleece Backed adhered to the deck per one of the following:

Option#1: Membrane adhered to the deck with JM Roofng System Urethane Adhesive applied in ½" - 3/4" ribbons 12" o.c. with min. 1.5" heat welded side laps. ***(Maximum Design Pressure:-147.5 psf. (See General Limitation #9.)***

Option #2: Membrane adhered to the deck with JM Roofing System Urethane Adhesive applied in ½" - 3/4" ribbons 6" o.c. with min. 1.5" heat welded side laps. ***(Maximum Design Pressure:-172.5 psf. (See General Limitation #9.)***

Option #3 Membrane adhered to the deck with MBR Low VOC Membrane Adhesive applied at a rate of 2-2.5 gal/100ft^2 with min. 1.5" heat welded side laps. ***(Maximum Design Pressure:-342.5 psf. (See General Limitation #9.)***

Maximum Design Pressure: See Options Above

Membrane Type:	Single Ply, PVC
Deck Type 4:	Lightweight Concrete
Deck Description:	Min. 500 psi Celcore MF with Celcore HS Rheology Modifying Admixture; Min. 1/8" slurry coat; Min. 1" EPS board; Min. 2" top coating with PVA curing compound cast over structural concrete.
System Type F(4):	Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier:	(Optional) DynaBase HW torch applied with a 4" side lap to structural concrete deck prepared with ASTM D41 primer.
Membrane:	JM PVC Fleece Backed adhered to the deck with JM Roofing System Urethane Adhesive applied in ½" - 3/4" ribbons spaced 4" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:	-257.5 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 500 psi Celcore MF with Celcore HS Rheology Modifying Admixture; Min. 1/8" slurry coat; Min. 1" EPS board; Min. 2" top coating with PVA curing compound cast over cementitious wood fiber, structural concrete or Min. 22 ga., Grade 33, vented Type B steel deck attached to structural supports spaced a maximum 5-ft o.c. with 5/8" puddle welds at each flute. Steel deck side laps stitched with 1/4"-14 HWH screws at a maximum 15" o.c.

System Type F(5): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier: (For structural concrete; Optional) DynaBase HW torch applied with a 4" side lap to structural concrete deck prepared with ASTM D41 primer.

Membrane: JM PVC Fleece Backed adhered to the deck per one of the following:

Option#1: Membrane adhered to the deck with JM Roofing System Urethane Adhesive applied in ½" - 3/4" ribbons 4" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:-197.5 psf. with Concrete and CWF substrate.
Maximum Design Pressure:-60 psf. with steel substrate.
(See General Limitation #9.)

Option #2: Membrane adhered to the deck with JM Roofing System Urethane Adhesive applied in ½" - 3/4" ribbons 12" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:-167.5 psf. with Concrete and CWF substrate.
Maximum Design Pressure:-60 psf. with steel substrate.
(See General Limitation #9.)

Maximum Design Pressure: See Options Above

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 380 psi Concrecel Cellular Lightweight Insulating Concrete cast over concrete deck.

System Type F(6): Membrane fully adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: JM PVC Fleece Backed fully adhered to the deck with MBR Low Voc Membrane Adhesive at a rate of 2-2.5 gal/100ft^2 with min. 1.5" heat welded side laps.

Maximum Design Pressure: -342.5 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 568 psi, 2" Elastizell Lightweight Insulating Concrete with Zell-Fibers cast over structiral concrete

System Type F(7): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Sheet:	DynaBase adhered with JM MBR RA Membrane Adhesive applied in ½-¾" wide ribbons spaced 12" o.c. with a 4" side lap.
Membrane:	JM PVC Fleece Backed membrane is adhered with JM Roofing System Urethane Adhesive applied in ½-¾" wide ribbons spaced 12" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:	-145 psf. (See General Limitation #9).

Membrane Type:	Single Ply, PVC
Deck Type 4:	Lightweight Concrete
Deck Description:	Min. 568 psi, 2" Elastizell Lightweight Insulating Concrete with Zell-Fibers cast over structiral concrete
System Type F(8):	Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Sheet:	DynaBase adhered with JM MBR RA Membrane Adhesive applied in ½-¾" wide ribbons spaced 6" o.c. with a 4" side lap.
Membrane:	JM PVC Fleece Backed membrane is adhered with JM Roofing System Urethane Adhesive applied in ½-¾" wide ribbons spaced 6" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:	-192.5 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 550 psi, 2" Elastizell Lightweight Insulating Concrete with Zell-Fibers cast over structiral concrete

System Type F(9): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane:	JM PVC Fleece Backed membrane is adhered with JM Roofing System Urethane Adhesive applied in ½-¾" wide ribbons spaced 12" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:	-177.5 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 568 psi, 2" Elastizell Lightweight Insulating Concrete with Zell-Fibers cast over structiral concrete

System Type F(10): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: JM PVC Fleece Backed membrane is fully with JM Roofing System Urethane Adhesive applied in ½-¾" wide ribbons spaced 6" o.c. with min. 1.5" heat welded side laps.

Maximum Design Pressure: -225 psf. (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 500 psi Celcore MF with Celcore HS Rheology Modifying Admixture; Min. 1/8" slurry coat; Min. 1" EPS board; Min. 2" top coating with PVA curing compound cast over cementitious wood fiber or structural concrete.

System Type F(11): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base sheet:	DynaBase adhered with JM RA Membrane Adhesive applied in 1" wide ribbons spaced 6" o.c. with a 4" side lap.
Membrane:	JM PVC Fleece Backed adhered to the deck with JM Roofing System Urethane Adhesive applied in ½" - 3/4" ribbons 6" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:	-117.5 psf. over cementitious wood fiber (See General Limitation #9). -192.5 psf. over concrete (See General Limitation #9).

Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete

Deck Description: Min. 500 psi Celcore MF with Celcore HS Rheology Modifying Admixture; Min. 1/8" slurry coat; Min. 1" EPS board; Min. 2" top coating with PVA curing compound cast over cementitious wood fiber or structural concrete.

System Type F(12): Membrane adhered to deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base sheet:	DynaBase adhered with JM RA Membrane Adhesive applied in 1" wide ribbons spaced 12" o.c. with a 4" side lap.
Membrane:	JM PVC Fleece Backed adhered to the deck with JM Roofing System Urethane Adhesive applied in ½" - 3/4" ribbons 12" o.c. with min. 1.5" heat welded side laps.
Maximum Design Pressure:	-117.5 psf. (See General Limitation #9).

LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE